IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Application

Appellant(s): Mojtaba Shariat et al.

Serial No.: 10/646,596 **Group Art Unit: 2616**

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Title: WIRELESS COMMUNICATIONS SYSTEM

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APPEAL BRIEF

Appellants submit this Appeal Brief to the Board of Patent Appeals and Interferences on appeal from the decision of the Examiner of Group Art Unit 2616 mailed March 21, 2008 finally rejecting claims 1-19 and 25.

In the event that an extension of time is required for this appeal brief to be considered timely, and a petition therefor does not otherwise accompany this appeal brief, any necessary extension of time is hereby petitioned for.

Appellants believe the only fee due is the $510 Appeal Brief fee which is being charged to counsel's credit card. In the event Appellants are incorrect, the Commissioner is authorized to charge any other fees to Deposit Account No. 20-0782/**LCNT/125128**.

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Real Party in Interest

The real party in interest is LUCENT TECHNOLOGIES INC.

Related Appeals and Interferences

Appellants assert that no appeals or interferences are known to Appellants, Appellants' legal representative, or assignee which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

Status of Claims

Claims 1-25 are pending in the application. Claims 1-25 were originally presented in the application. Claims 20-24 are withdrawn. Claim 25 has been amended. The final rejection of claims 1-19 and 25 is appealed.

Status of Amendments

All claim amendments have been entered.

Summary of Claimed Subject Matter

Embodiments of the present invention are generally directed to transporting Internet Protocol (IP)-formatted communications over a Universal Mobile Telecommunications System (UMTS) wireless communications system that includes a base station and a radio network controller. In one embodiment, the communication system includes an inter-working gateway adapted for interconnection to the radio network controller and the base station. The inter-working gateway is adapted to communicate via Internet transport protocols and UMTS-based transport protocols. The inter-working gateway is further adapted to provide interworking between radio-controlled network layer (RNL) protocols. More specifically, the inter-working gateway is adapted to reformat communications with movable UMTS-based radio-controlled network layer protocols for transport to the radio network controller and to reformat communications with movable Internet radio-controlled network layer protocols for transport to the base station.

For the convenience of the Board of Patent Appeals and Interferences, Appellants' independent claims 1, 19, and 25 are presented below with citations to various figures and appropriate citations to at least one portion of the specification for elements of the appealed claims.

Claim 1 positively recites (with reference numerals, where applicable, and cites to at least one portion of the specification added):

> 1. (original) A communication system for transporting Internet protocol-formatted communications over a Universal Mobile Telecommunications System (UMTS) wireless communications system, the communication system including a base station (40) and a radio network controller (44), the communication system further comprising:
>
> an inter-working gateway (48) adapted for interconnection to the radio network controller (44) and the base station (40), the inter-working gateway (48) being adapted to communicate via Internet transport

protocols and UMTS-based transport protocols, the inter-working gateway (48) being further adapted to reformat communications with movable UMTS-based radio-controlled network layer protocols for transport to the radio network controller (44) and to reformat communications with movable Internet radio-controlled network layer protocols for transport to the base station (40).

Support for the elements of claim 1 can be found at least from the following sections of Appellants' specification: Para. 0033 – 0035, Para. 0038 – 0045, and Para. 0056 - 0059.

Claim 19 positively recites (with reference numerals, where applicable, and cites to at least one portion of the specification added):

19. (original) An inter-working gateway (48) for wirelessly transporting Internet protocol-formatted communications in a Universal Mobile Telecommunications System (UMTS) communications system, the inter-working gateway comprising:

means for communicating via Internet transport protocols and UMTS-based transport protocols; (See Figures 4 – 7).

means for reformatting communications using movable UMTS-based transport protocols for transport to a radio network controller (44); (See Figures 4 – 7). and

means for reformatting communications using movable Internet radio-controlled network layer protocols from the radio network controller (44) to the inter-working gateway (48). (See Figures 4 – 7).

Support for the elements of claim 19 can be found at least from the following sections of Appellants' specification: Para. 0033 – 0035, Para. 0038 – 0045, and Para. 0052 – 0055, and Para. 0056 – 0059.

Claim 25 positively recites (with reference numerals, where applicable, and cites to at least one portion of the specification added):

> 25. (previously presented) A method for transporting Internet protocol-formatted communications over a Universal Mobile Telecommunications System (UMTS) wireless communications system, the UMTS communication system including a base station (40) and a radio network controller (44), the method comprising:
>
> reformatting communications using movable UMTS-based radio-controlled network layer protocols for transport between the base station (40) and the radio network controller (44); and
>
> reformatting communications using movable Internet radio-controlled network layer protocols for transport between the base station (40) and the radio network controller (44).

Support for the elements of claim 25 can be found at least from the following sections of Appellants' specification: Para. 0033 – 0035, Para. 0038 – 0045, and Para. 0056 - 0059.

Grounds of Rejection to be Reviewed on Appeal

Claims 1-5, 7-14, 16-19 and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Ylitalo (U.S. Patent Application Publication No. 2004/0204111) and Kekki (U.S. Patent Application Publication No. 2005/0286528).

Claims 6 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ylitalo or Kekki in view of Verma et al. (U.S. Patent Application Publication No. 2005/0210154).

Arguments

Rejection Under 35 U.S.C. 102

Claims 1-5, 7-14, and 16-18

Claims 1-5, 7-14, and 16-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Ylitalo and Kekki. The rejection is traversed.

Anticipation requires the presence, in a single prior art disclosure, of each and every element of the claimed invention, arranged as in the claim.

Appellants' claim 1 claims a communication system for transporting Internet protocol-formatted communications over a Universal Mobile Telecommunications System (UMTS) wireless communications system that includes a base station, a radio network controller, and an inter-working gateway adapted for interconnection to the radio network controller and the base station. The inter-working gateway is adapted to communicate via Internet transport protocols and UMTS-based transport protocols. The inter-working gateway is further adapted to reformat communications with movable UMTS-based radio-controlled network layer protocols for transport to the radio network controller and to reformat communications with movable Internet radio-controlled network layer protocols for transport to the base station.

Appellants note that the Examiner appears to fail to acknowledge the distinction between transport protocols and radio-controlled network layer protocols. Appellants' claim 1 includes limitations stating that the inter-working gateway is adapted to communicate via Internet transport protocols and UMTS-based transport protocols, and, further, that the inter-working gateway is adapted to reformat communications with movable UMTS-based radio-controlled network layer protocols for transport to the radio network controller and to reformat communications with movable Internet radio-controlled network layer protocols for transport to the base station.

As described in Appellants' specification, Appellants provide many examples of movable UMTS-based radio-controlled network layer protocols and movable Internet radio-controlled network layer protocols. Specifically, Appellants' specification states

that "FIG. 5 discloses a set of Internet protocols installed in the IWG 48. The Internet protocols comprise, FPs, OA&M, NBAP, Adaptation, UDP and IP, collectively referred to as movable Internet radio-controlled network layer protocols, i.e., Internet RNL protocols.... Further, FIG. 5 discloses a set of UMTS protocols installed in the IWG 48. The UMTS protocols comprise FTP, ALCAP, NBAP, TCP/UDP, STC, IP, SSCF-UNI, EPs, LLC-SNAP, SSCOP, AAL2 and AAL5, collectively referred to as moveable radio-controlled network layer protocols, i.e., UMTS, RNL protocols." (Specification, Paragraph 0038 - 0039).

Ylitalo and Kekki each fail to teach or suggest each and every limitation of Appellants' claim 1, as arranged in the claim.

Ylitalo Reference

Ylitalo fails to disclose each and every element of the claimed invention, as arranged in independent claim 1. Specifically, Ylitalo fails to teach or suggest at least the limitation of "the inter-working gateway being further adapted to reformat communications with movable UMTS-based radio-controlled network layer protocols for transport to the radio network controller and to reformat communications with movable Internet radio-controlled network layer protocols for transport to the base station," as claimed in Appellants' claim 1.

Rather, Ylitalo merely discloses a method of allocating radio resources in a telecommunications system. More specifically, Ylitalo discloses a core network in communication with a UMTS Terrestrial Radio Access Network (UTRAN) and an Internet Protocol Radio Access Network (IP RAN). Ylitalo, however, is devoid of any teaching or suggestion of any radio-controlled network layer protocols, much less any movable UMTS-based radio-controlled network layer protocols or movable Internet radio-controlled network layer protocols. Thus, Ylitalo also fails to teach or suggest reformatting movable UMTS-based radio-controlled network layer protocols for transport to the radio network controller or reformatting communications with movable Internet radio-controlled network layer protocols for transport to the base station, as claimed in Appellants' claim 1.

In the Claim Rejections section of the Final Office Action, dated March 21, 2008, the Examiner states "see figure 1 of Ylitalo where the gateway 157 reformat communications between BTS 152 and RNC 146." (Final Office Action, Pg. 3). Appellants respectfully note that Figure 1 of Ylitalo, as well as the corresponding portion of the description of Ylitalo, is devoid of any teaching or suggestion of any radio-controlled network layer protocols, much less UMTS-based radio-controlled network layer protocols or Internet radio-controlled network layer protocols. Ylitalo is devoid of any teaching or suggestion of reformatting communications with movable UMTS-based radio-controlled network layer protocols for transport to the radio network controller or reformatting communications with movable Internet radio-controlled network layer protocols for transport to the base station, as claimed in Appellants' claim 1.

Furthermore, Appellants respectfully note that the Examiner has failed to provide adequate support for the rejection of Appellants' claim 1.

First, in the Claim Rejections section of the Final Office Action, dated March 21, 2008, the Examiner states "see figure 1 of Ylitalo where the gateway 157 reformat communications between BTS 152 and RNC 146." (Final Office Action, Pg. 3). The Examiner merely states that Ylitalo discloses a gateway 157 that reformats communications between a BTS 152 and a RNC 146. The Examiner fails to specifically identify any portion of Ylitalo that discloses any radio-controlled network layer protocols, much less reformatting communications with movable UMTS-based radio-controlled network layer protocols for transport to the radio network controller or reformatting communications with movable Internet radio-controlled network layer protocols for transport to the base station, as claimed in Appellants' claim 1.

Second, in the Response to Arguments section of the Final Office Action, dated March 21, 2008, the Examiner states that "...elements 34 and 38 in figure 2 of this application is the same as elements 142 and 146 of Ylitalo and elements 40, 48, and 44 in figure 4 of this application is the same as elements 152, 157, and 146 of Ylitalo." (Final Office Action, Pg. 7). In other words, the Examiner merely provides a conclusory statement equating the elements of Appellants' application with elements of Ylitalo. The Examiner fails to provide any support for, or reasoning in support of, the Examiner's inference that the elements of Ylitalo support the same functions as, or operate in a

similar manner to, the elements of Appellants' application. The Examiner fails to cite any portion of Ylitalo that discloses any radio-controlled network layer protocols, much less reformatting communications with movable UMTS-based radio-controlled network layer protocols for transport to the radio network controller or reformatting communications with movable Internet radio-controlled network layer protocols for transport to the base station, as claimed in Appellants' claim 1.

As such, Ylitalo fails to disclose each and every element of the claimed invention, as arranged in Appellants' independent claim 1.

Kekki Reference

Kekki fails to disclose each and every element of the claimed invention, as arranged in independent claim 1. Specifically, Kekki fails to teach or suggest at least the limitation of "the inter-working gateway being further adapted to reformat communications with movable UMTS-based radio-controlled network layer protocols for transport to the radio network controller and to reformat communications with movable Internet radio-controlled network layer protocols for transport to the base station" as claimed in Appellants' claim 1.

Rather, although Kekki discloses an interworking function (IWF), Kekki is primarily directed toward providing interworking in the Iur interface between two RNCs of a UMTS network. The teachings of Kekki directed toward the Iur interface between RNCs of a UMTS network are not applicable to Appellants' limitations of an interworking gateway for transporting Internet protocol-formatted communications between a base station and a radio network controller of a UMTS wireless communications system.

Furthermore, the portions of Kekki which discuss the Iub interface between a Node B and an RNC of a UMTS network merely state that ALCAP is used for communications in the AAL2 domain and that a user defined information element of ALCAP is used for communications in the IP domain. Kekki is devoid of any teaching or suggestion of interworking between radio network layer protocols as claimed in Appellants' claim 1. With respect to descriptions of the Iub interface in Kekki, Appellants note that Kekki repeatedly states that communications over the Iub interface

are supported using ALCAP and a user defined information element of ALCAP (namely, the Served User Transport (SUT) Information Element (IE)). As described in Kekki, ALCAP is used for communications in the AAL2 domain and the user defined information element of ALCAP is used in the IP domain such that there is no need for interworking between radio network layer protocols. This is clearly illustrated in Figure 4 of Kekki, which shows (at the top of the figure) that the radio network layer (RNL) communication between the AAL2 UTRAN node and the IP UTRAN node does not traverse the interworking function. This is further supported in many places within the text of Kekki, at least some of which are described hereinbelow (namely, Para. 0019 – 0021 and 0031 – 0032).

First, Kekki states that "[f]urther there is no need for Radio Network Layer inter-working as the standard RANAP/RNSAP/NBAP without any new Information Elements can be used. Inter-working function can be implemented and used solely in the Transport Network Layer." (Kekki, Para. 0021, Emphasis added). This is also demonstrated by Figure 4 of Kekki, as described hereinabove, and is further supported by Kekki, which also states that "...the IWF terminates the Q.2630 from both sides and is acting as an AAL2 served user. The Radio Network Layer signalling does not have to go via the IWF at all. This is one of the benefits of the present invention. On ATM/AAL2 side the Q.2630 is used exactly in the same way as it has been specified in 3GPP UTRAN specifications so far. On IP side only the SUT (Served User Transport) Information Element and its contents as well as the Binding ID (B-ID) are relevant for the UTRAN IP node." (Kekki, Para. 0031 – 0032, Emphasis added). In other words, the IWF is an AAL2 served user from both sides, i.e., from both the AAL2 UTRAN node and the IP UTRAN node, such that the IWF does not provide interworking between radio network layer protocols.

Second, Kekki states that "[f]urther the invention is based on the idea that the existing ALCAP, e.g. Q.2630 is used not only in the ATM/AAL2 domain as an ALCAP, i.e. no changes to the existing specifications, but also as an auxiliary control protocol in the IP transport domain. This is accomplished by using a user defined information element of said existing ALCAP....In one example it is implemented by extending the capabilities of Q.2630 by utilising its Served User Transport (SUT) Information Element.

The SUT is an optional information element in the Establish request message of Q.2630 that can convey any information transparently from one AAL2 served user to another (the peer AAL2 served user)." (Kekki, Para. 0019, Emphasis added). In other words, Kekki discloses that ALCAP is used in the AAL2 domain and in the IP domain (using the SUT IE), such that interworking between radio network layer protocols is not required.

Third, Kekki states that "[w]hen implementing a new type of transport layer protocol, there is no need for a new ALCAP protocol. Instead of it the existing ALCAP, i.e. Q.2630 in one example can be used also in the new protocol, e.g. IP, side. Signalling bearer for Q.2630 over IP is already available in Release 99. Further only a subset of an existing ALCAP (Q.2630) needs to be implemented in the IP based RAN nodes, thus reducing the inter-working overhead there, and only minor changes in the existing ATM/AAL2 network Elements are needed." (Kekki, Para. 0020, Emphasis added). In other words, again, Kekki discloses that a subset of ALCAP is used in IP based RAN nodes, such that interworking between radio network layer protocols is not required.

From the cited portions of Kekki, it is clear that Kekki is directed toward preventing any interworking of radio network layer (RNL) protocols by using ALCAP in the AAL2 domain of the RAN and reusing a subset of ALCAP in the IP-based RAN nodes.

Thus, since Kekki discloses that the IWF uses ALCAP in both the AAL2 domain and the IP domain in order to prevent any need for interworking between radio network layer protocols, Kekki actually teaches away from Appellants' claim 1, in which interworking is provided between radio network layer protocols (i.e., the limitation of "the inter-working gateway being further adapted to reformat communications with movable UMTS-based radio-controlled network layer protocols for transport to the radio network controller and to reformat communications with movable Internet radio-controlled network layer protocols for transport to the base station," as claimed in Appellants' claim 1).

Thus, Kekki fails to teach or suggest the limitations of "the inter-working gateway being further adapted to reformat communications with movable UMTS-based radio-controlled network layer protocols for transport to the radio network controller and to

reformat communications with movable Internet radio-controlled network layer protocols for transport to the base station," as claimed in Appellants' claim 1.

Furthermore, in the Response to Arguments section of the Final Office Action, dated March 21, 2008, the Examiner states that "[p]aragraph 0030 further teaches that the IWF can be implemented as a standalone node or as part of any other network node for example IP BTS, RNC, some gateway or server." (Final Office Action, Pg. 7). Appellants respectfully note that the Examiner's assertion regarding the manner in which the IWF of Kekki is implemented does not provide support for the Examiner's rejection of claim 1. The Examiner has failed to provide any support for, or reasoning in support of, the Examiner's assertion that Kekki discloses Appellants' limitation of "the inter-working gateway being further adapted to reformat communications with movable UMTS-based radio-controlled network layer protocols for transport to the radio network controller and to reformat communications with movable Internet radio-controlled network layer protocols for transport to the base station." The Examiner fails to cite any portion of Kekki that discloses reformatting communications with movable UMTS-based radio-controlled network layer protocols for transport to the radio network controller or reformatting communications with movable Internet radio-controlled network layer protocols for transport to the base station, as claimed in Appellants' claim 1.

Thus, Kekki fails to disclose each and every element of the claimed invention, as arranged in Appellants' independent claim 1.

Conclusion

As such, independent claim 1 is not anticipated by either Ylitalo or Kekki and is patentable under 35 U.S.C. 102. Furthermore, since all of the dependent claims that depend from the independent claims include all the limitations of the respective independent claim from which they ultimately depend, each such dependent claim is also allowable over Ylitalo and Kekki.

Therefore, Appellants' claims 1-5, 7-14, and 16-18 are allowable over both Ylitalo and Kekki under 35 U.S.C. 102. The Examiner is respectfully requested to withdraw the rejection.

Claim 19

Claim 19 is rejected under 35 U.S.C. 102(e) as being anticipated by Ylitalo and Kekki. The rejection is traversed.

Anticipation requires the presence, in a single prior art disclosure, of each and every element of the claimed invention, arranged as in the claim.

As described hereinabove with respect to Appellants' claim 1, Ylitalo and Kekki each fail to teach or suggest an inter-working gateway adapted to communicate via Internet transport protocols and UMTS-based transport protocols, and further adapted to reformat communications with movable UMTS-based radio-controlled network layer protocols for transport to the radio network controller and to reformat communications with movable Internet radio-controlled network layer protocols for transport to the base station.

Independent claim 19 recites relevant limitations similar to those recited in independent claim 1. Specifically, Appellants' independent claim 19 claims an inter-working gateway for wirelessly transporting Internet protocol-formatted communications in a UMTS communications system, including the limitations of means for reformatting communications using movable UMTS-based transport protocols for transport to a radio network controller and means for reformatting communications using movable Internet radio-controlled network layer protocols from the radio network controller to the inter-working gateway.

As such, for at least the same reasons discussed above with respect to claim 1, Ylitalo or Kekki each fail to teach or suggest each and every limitation of Appellants' independent claim 19. Namely, Ylitalo and Kekki each fail to teach or suggest at least the limitation of "means for reformatting communications using movable Internet radio-controlled network layer protocols from the radio network controller to the inter-working gateway," as claimed in Appellants' claim 19.

As such, independent claim 19 is not anticipated by either Ylitalo or Kekki and is patentable under 35 U.S.C. 102.

Therefore, Appellants' claim 19 is allowable over both Ylitalo and Kekki under 35 U.S.C. 102. The Examiner is respectfully requested to withdraw the rejection.

Claim 25

Claim 25 is rejected under 35 U.S.C. 102(e) as being anticipated by Ylitalo and Kekki. The rejection is traversed.

Anticipation requires the presence, in a single prior art disclosure, of each and every element of the claimed invention, arranged as in the claim.

As described hereinabove with respect to Appellants' claim 1, Ylitalo and Kekki each fail to teach or suggest an inter-working gateway adapted to communicate via Internet transport protocols and UMTS-based transport protocols, and further adapted to reformat communications with movable UMTS-based radio-controlled network layer protocols for transport to the radio network controller and to reformat communications with movable Internet radio-controlled network layer protocols for transport to the base station.

Independent claim 25 recites relevant limitations similar to those recited in independent claim 1. Specifically, Appellants' independent claim 25 claims a method for transporting Internet protocol-formatted communications over a UMTS wireless communications system, where the method includes reformatting communications using movable UMTS-based radio-controlled network layer protocols for transport between a base station and a radio network controller, and reformatting communications using movable Internet radio-controlled network layer protocols for transport between the base station and the radio network controller.

As such, for at least the same reasons discussed above with respect to claim 1, Ylitalo or Kekki each fail to teach or suggest each and every limitation of Appellants' independent claim 25. Namely, Ylitalo and Kekki each fail to teach or suggest at least the limitation of "means for reformatting communications using movable Internet radio-controlled network layer protocols from the radio network controller to the inter-working gateway," as claimed in Appellants' claim 25.

As such, independent claim 25 is not anticipated by either Ylitalo or Kekki and is patentable under 35 U.S.C. 102.

Therefore, Appellants' claim 25 is allowable over both Ylitalo and Kekki under 35 U.S.C. 102. The Examiner is respectfully requested to withdraw the rejection.

Rejection Under 35 U.S.C. 103(a)

Claims 6 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ylitalo or Kekki in view of Verma. The rejection is traversed.

This ground of rejection applies only to dependent claims, and is predicated on the validity of the rejection under 35 U.S.C. 102 given Ylitalo and Kekki. Since the rejection under 35 U.S.C. 102 given Ylitalo and Kekki has been overcome, as described hereinabove, and there is no argument put forth by the Office Action that Verma supplies that which is missing from Ylitalo and Kekki to render the independent claims anticipated, this ground of rejection cannot be maintained.

Therefore, Appellants' claims 6 and 15 are allowable over Ylitalo or Kekki in view of Verma under 35 U.S.C. 103. The Examiner is respectfully requested to withdraw the rejection.

Conclusion

Thus, Appellants submit that all of the claims presently in the application are allowable under the provisions of 35 U.S.C. §§102 and 103.

For the reasons advanced above, Appellants respectfully urge that the rejection of claims 1-19 and 25 is improper. Reversal of the rejections of the Final Office Action is respectfully requested.

Respectfully submitted,

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CLAIMS APPENDIX

1. (original) A communication system for transporting Internet protocol-formatted communications over a Universal Mobile Telecommunications System (UMTS) wireless communications system, the communication system including a base station and a radio network controller, the communication system further comprising:

an inter-working gateway adapted for interconnection to the radio network controller and the base station, the inter-working gateway being adapted to communicate via Internet transport protocols and UMTS-based transport protocols, the inter-working gateway being further adapted to reformat communications with movable UMTS-based radio-controlled network layer protocols for transport to the radio network controller and to reformat communications with movable Internet radio-controlled network layer protocols for transport to the base station.

2. (original) The communications system as recited in claim 1, wherein the UMTS communications system exists at an installed site.

3. (original) The communications system as recited in claim 1, wherein the inter-working gateway is supplied as pre-installed with the transport protocols.

4. (original) The communications system as recited in claim 1, wherein the inter-working gateway is adapted to receive and download the radio-controlled network layer protocols and the transport protocols from the base station.

5. (original) The communications system as recited in claim 1, wherein the base station and the inter-working gateway are interconnected in a local area network.

6. (original) The communications system as recited in claim 1, further comprising:

an SDRAM memory;

one or more channel elements, each comprising a digital signal processor and associated flash memory and an application specific integrated circuit to manage baseband processing; and

a microprocessor for configuring each channel element, storing user data in the SDRAM memory, and exchanging user data with the digital signal processor.

7. (original) The communications system as recited in claim 1, wherein an interconnection of the inter-working gateway with the base station carries the communications reformatted with the movable UMTS-based radio-controlled network layer protocols in a first direction, and the communications reformatted with the movable Internet radio-controlled network layer protocols in a second direction.

8. (original) The communications system as recited in claim 1, wherein an interconnection of the inter-working gateway with the radio network controller carries the communications reformatted with the movable UMTS-based radio-controlled network layer protocols in a first direction, and the communications reformatted with the movable Internet radio-controlled network layer protocols in a second direction.

9. (original) The communications system as recited in claim 1, wherein

an interconnection of the inter-working gateway with the base station carries the communications reformatted with the movable UMTS-based radio-controlled network layer protocols in a first direction, and the communications reformatted with the movable Internet radio-controlled network layer protocols in a second direction, and

an interconnection of the inter-working gateway with the radio network controller carries the communications reformatted with the movable UMTS-based radio-controlled network layer protocols in a first direction, and the communications formatted with the movable Internet radio-controlled network layer protocols in a second direction.

10. (original) The communications system as recited in claim 1, further comprising:

a Node-B base station adapted for transmitting and receiving cellular telephone communications, the Node-B base station being interconnected with the radio network controller for exchanging wireless cellular telephone communications.

11. (original) The communications system as recited in claim 10, wherein the UMTS communications system exists at an installed site.

12. (original) The communications system as recited in claim 10, wherein the inter-working gateway is supplied as pre-installed with the transport protocols.

13. (original) The communications system as recited in claim 10, wherein the inter-working gateway is adapted to receive and download the radio-controlled network layer protocols and the transport protocols from the base station.

14. (original) The communications system as recited in claim 10, wherein the base station and the inter-working gateway are interconnected in a local area network.

15. (original) The communications system as recited in claim 10, further comprising:

an SDRAM memory;

one or more channel elements each comprising, a digital signal processor and associated flash memory and an application specific integrated circuit to manage baseband processing; and

a microprocessor for configuring each channel element, storing user data in the SDRAM memory, exchanging user data with the digital signal processor, and processing the movable protocols.

16. (original) The communications system as recited in claim 10, wherein an interconnection of the inter-working gateway with the base station carries the communications reformatted with the movable UMTS-based radio-controlled network

layer protocols in a first direction, and the communications reformatted with the movable Internet radio-controlled network layer protocols in a second direction.

17. (original) The communications system as recited in claim 10, wherein an interconnection of the inter-working gateway with the radio network controller carries the communications reformatted with the movable UMTS-based radio-controlled network layer protocols in a first direction, and the communications reformatted with the movable Internet radio-controlled network layer protocols in a second direction.

18. (original) The communications system as recited in claim 10, wherein

an interconnection of the inter-working gateway with the base station carries the communications reformatted with the movable UMTS-based radio-controlled network layer protocols in a first direction, and the communications reformatted with the movable Internet radio-controlled network layer protocols in a second direction, and

an interconnection of the inter-working gateway with the radio network controller carries the communications reformatted with the movable UMTS-based radio-controlled network layer protocols in a first direction, and the communications reformatted with the movable Internet radio-controlled network layer protocols in a second direction.

19. (original) An inter-working gateway for wirelessly transporting Internet protocol-formatted communications in a Universal Mobile Telecommunications System (UMTS) communications system, the inter-working gateway comprising:

means for communicating via Internet transport protocols and UMTS-based transport protocols;

means for reformatting communications using movable UMTS-based transport protocols for transport to a radio network controller; and

means for reformatting communications using movable Internet radio-controlled network layer protocols from the radio network controller to the inter-working gateway.

20. (withdrawn)

21. (withdrawn)

22. (withdrawn)

23. (withdrawn)

24. (withdrawn)

25. (previously presented) A method for transporting Internet protocol-formatted communications over a Universal Mobile Telecommunications System (UMTS) wireless communications system, the UMTS communication system including a base station and a radio network controller, the method comprising:

reformatting communications using movable UMTS-based radio-controlled network layer protocols for transport between the base station and the radio network controller; and

reformatting communications using movable Internet radio-controlled network layer protocols for transport between the base station and the radio network controller.

EVIDENCE APPENDIX

None

RELATED PROCEEDINGS APPENDIX

None